

ABSTRACT OF THE DISCLOSURE

An apparatus comprising a body having dimensions suitable for light transmission therethrough, the body comprising a core extending therethrough, a first portion of the core comprising an index of refraction different than a second portion of the core and a cladding disposed about the core. An optical electronic integrated circuit (OEIC) substrate comprising a plurality of waveguides and a light source emitter coupled to at least one of the plurality of waveguides. A method comprising providing optical signals to an optical electronic integrated circuit (OEIC) through a plurality of waveguides are arranged in a circuit of different paths; and selecting an optical path by the index of refraction of a portion of the core.